REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 1, 2, 3, 4 and 9 have been amended, and new claims 36-41 have been added. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-7, 9-14, and 36-41 are pending. Claims 15-35 are withdrawn. Reconsideration is respectfully requested.

REJECTION UNDER 35 U.S.C. §103:

A. In the Office Action, at pages 2-6, numbered paragraphs 4-14, claims 1, 4-7, and 9-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Segal (USPN 6,791,567; hereafter, Segal) in view of Kimura (USPN 7,084,880; hereafter, Kimura). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

Claims 1, 2, 3, 4 and 9 have been amended for clarity.

Amended independent claim 1 and new claim 37 have technical features of detecting a color signal having a higher maximum value than the other color signals of the RGB color signals, increasing the color temperature of the detected color signal to a predetermined value to compensate for the color temperature of the detected color signal, and adjusting both a brightness and a color temperature of a screen.

It is respectfully submitted that Segal, col. 1, lines 62-67, discloses determining a maximum value of at least one color component for at least one value, determining a ratio of the maximum value to a maximum allowable value, determining a scaling factor based on the determined ratio, and setting the value to be color clipped to a value including the scaling factor. However, Segal does not include the above-described technical features of each of claims 1, 12 and new claim 37 of the present invention.

Also, Kimura, col. 1, lines 43-58, discloses a technical feature of increasing a color temperature of approximate white having a low color temperature, but does not include the above-described features of each of amended independent claim 1, claim 12 and new claim37 of the present invention.

Accordingly, it is respectfully submitted that amended independent claim 1, independent claim 12, and new claim 37 of the present invention are patentable over Segal and Kimura

based on the differences of the technical features between the present claimed invention and Segal and Kimura.

The Examiner admits that Segal does not disclose having a color temperature increased to a predetermined value, nor does Segal disclose a system controller providing a predetermined value. The Examiner submits" "Kimura however, discloses, a color temperature correction apparatus that works when a luminance is high and a color saturation is below a predetermined threshold (col. 2, lines 59-65). In other words, the invention changes the color temperature for white areas and close-to-white areas. Based on this determination of luminance and saturation, the invention of Kimura then increases one component in comparison to others, raising the color temperature to some desired level (col. 1, lines 43-58). The motivation for this is to make a white color more pleasing to a user (col. 1, lines 43-58). It would have been obvious to one skilled in the art to modify Segal to modify a color temperature to a predetermined color temperature based on a threshold in order to make a white color more pleasing to a user as taught by Kimura." (emphasis added)

It is respectfully submitted that there are seven kinds of color contrast:

1) Hue (color name, i.e., is related to wavelength);
2) Value (light or dark) (One changes the value of a color by adding black (lowering the value) or adding white (raising the value).);
3) Color Temperature;
4) Complementary (Two colors on opposite sides of the color wheel, which when placed next to each other make both appear brighter. The complementary color of a primary color (red, blue, and yellow) is the color you get by mixing the other two (red + blue = purple; blue + yellow = green; red + yellow = orange). So the complementary color for red is green, for blue it's orange, and for yellow it's purple.);
5) Simultaneous Contrast (A target color seems to be tinged with a complementary color of a surround (most noticeable with a gray target));
6) Saturation (Saturation is related to how much white content is in the stimulus - it describes the purity of colors. Pure color is color at its highest level of saturation.); and
7) Extension/Proportion (The color contrast of extension / proportion relates to the respective values of colors and their distribution over an area of a composition. Extension / proportion involves an application of the relative values of various colors to create harmony. For example, two colors of equal value (such as red and green) cover the same relative AREA of the composition. Consequently, they compete for visual dominance. When a large field of green includes a small area of red, then contrast is created. The red is emphasized.).

Brightness is the *perceived intensity* of light coming from the image itself, rather than any property of the portrayed scene. Brightness is sometimes defined as *perceived luminance*.

Thus, as set forth in the response to the previous office action, Segal teaches "color clipping," which is based on a single adjustment to each of the pixel values for each color component (see Segal, col. 4, lines 54-59 and Table 2) using the above formula. Hence, in contrast to traditional color clipping wherein scaled pixel values for Red, Green and Blue are all

255 (see Segal, Table 3), Segal adjusts each of Red, Green and Blue using the above formula so that, for example, an input of Red 637.5, Green 510.0, and Blue 382.5 are converted to Red 255, Green 228 and Blue 184 (see Segal, Tables I and 2). Hence, an adjusted pixel value for each color component is determined by Segal.

It is respectfully submitted that Kimura teaches: "A video display apparatus comprises a color temperature correction circuit which controls temperature color of an input video signal; a display device which displays an image upon basis of said video signal corrected by said color temperature correction circuit; and a signal producing circuit which obtains a hue signal from said input video signal. The color temperature correction circuit controls said hue signal corresponding to the video signal of white color attributes, which has luminance equal to or greater than a predetermined value and chroma saturation equal to or less than a predetermined value, whereby achieving the color temperature correction." (emphasis added) (see Abstract, Kimura)

That is, Kimura teaches adjusting color temperature of an input video signal by controlling a hue signal corresponding to a video signal of white color attributes based on a luminance and a chroma saturation. It is respectfully submitted that independent claims 1 and/or 12 of the present invention do not teach or suggest controlling a hue signal corresponding to a video signal of white color attributes. Hence Kimura teaches away from the claimed invention.

In contrast, claim 1, and similarly, claim 12 of the present invention, recites: "An apparatus for adjusting a brightness and a color temperature of a screen on which input RGB color signals are displayed, the apparatus comprising: a RGB color signal generator to detect a maximum value of each of the RGB color signals, to compare the maximum values, to detect a color signal having a higher maximum value than the other color signals of the RGB color signals, and to increase the color temperature of the detected color signal to a predetermined value to compensate for the color temperature of the detected color signal; and a system controller to provide a predetermined critical value, the predetermined value, and data on conditions for detecting a color signal having the higher maximum value than the other color signals to the RGB color signal generator, wherein the RGB color signal generator to increase or decrease a brightness level of an image displayed on the screen by one of a plurality of predetermined ratios based on the comparison result."

Thus, it is respectfully submitted that independent claims 1 and 12 of the present invention are patentable under 35 U.S.C. §103(a) over Segal (USPN 6,791,567) in view of Kimura (USPN 7,084,880). Since claims 4-7, 9-11 and 13-14 depend, directly or indirectly, from independent claims 1 and 12, respectively, claims 4-7, 9-11 and 13-14 are patentable under 35 U.S.C. §103(a) over Segal (USPN 6,791,567) in view of Kimura (USPN 7,084,880) for at least the reasons independent claims 1 and 12 are patentable under 35 U.S.C. §103(a) over

Segal (USPN 6,791,567) in view of Kimura (USPN 7,084,880).

B. In the Office Action, at pages 6-7, numbered paragraphs 15-18, claims 2 and 3 were rejected under 35 U.S.C. §103(a) as being unpatentable over Segal (USPN 6,791,567; hereafter, Segal) in view of Kimura (USPN 7,084,880; hereafter, Kimura) and further in view of Park (US Publication 2002/0163527; hereafter, Park). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

Segal teaches: "A method for color clipping an image to be displayed, the image having at least one value to be color clipped, comprising the steps of: (A) determining a maximum value of at least one color component for the at least one value; (B) determining a ratio of the maximum value to a maximum allowable value; (C) determining a scaling factor based on the determined ratio; (D) setting the value to be color clipped to a value including the scaling factor; and (E) wherein step (D) includes determining the value including the scaling factor to be: $Max_{Pixel} - Max_{Pixel} *(x\text{-}Color/ Max_{Component})^{Scaling\ factor}$. Segal teaches color clipping. Segal fails to teach or suggest an apparatus that adjusts the color temperature value using a predetermined value and adjusts, up or down, the brightness level of pixels using a predetermined ratio, as is set forth in independent claim 1 of the present invention.

Park teaches displaying an image on a screen, providing a non-active area so as to be adjacent to the image within the screen and adjusting the brightness of the image to be matched with that of the non-active area (see, e.g., claim 1 of Park). Park sets up brightness and contrast of the image before adjusting the brightness using the brightness of a black color area. Park teaches displaying a predetermined image (active area of the screen), and brightness and contrast of the image are set up to the maximum value by use of a bright adjusting button and a contrast button on the CRT monitor. Four corners of the image are respectively formed with an outline to indicate the size of the image, and a color of the inside image area is set to black. Next, the image is reduced to a predetermined size. As the image is reduced, the reduced image is displayed in the center of the screen. Reduction can be made to an arbitrary fraction of its normal screen size, to perhaps forty (40%), fifty (50%) percent or approximately sixty (60%) percent. The remaining area surrounding the reduced image constitutes a non-active area and is indicated in black, and the black area within the reduced image is indicated lighter than the non-active area (that is, a black raster area of the CRT), creating a difference in brightness. Therefore, in order to match the brightness of the black area within the reduced image to the brightness of the non-active area on the outer circumference of the reduced image, a user operator part is adjusted so as to make the color values appear identical by reducing the

brightness of the reduced image. The black point of the monitor is set up by adjusting the brightness of the monitor, and the white point of the monitor can be obtained by adjusting the contrast value to the maximum value based on the set black point. As a next step, the reduced image is restored to its original size (see paragraphs [0057] and [0058], Park). Hence, Park does not teach or suggest an apparatus that, in combination, adjusts the color temperature value using a predetermined value and adjusts, up or down, the brightness level of pixels using a predetermined ratio, as is set forth in independent claim 1 of the present invention.

As noted above, Kimura teaches adjusting color temperature of an input video signal by controlling a hue signal corresponding to a video signal of white color attributes based on a luminance and a chroma saturation, but does not teach or suggest an apparatus that, in combination, adjusts the color temperature value using a predetermined value and adjusts, up or down, the brightness level of pixels using a predetermined ratio, as is set forth in independent claim 1 of the present invention.

Hence, independent claim 1 of the present invention is patentable under 35 U.S.C. §103(a) over Segal (USPN 6,791,567) in view of Kimura (USPN 7,084,880) and further in view of Park (US Publication 2002/0163527), alone or in combination. Since claims 2 and 3 depend from claim 1, claims 2 and 3 are patentable under 35 U.S.C. §103(a) over Segal (USPN 6,791,567) in view of Kimura (USPN 7,084,880) and further in view of Park (US Publication 2002/0163527) for at least the reasons claim 1 is patentable under 35 U.S.C. §103(a) over Segal (USPN 6,791,567) in view of Kimura (USPN 7,084,880) and further in view of Park (US Publication 2002/0163527), alone or in combination.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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